

IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claim 1 (Currently Amended): A cleaning system, comprising:

a cleaning medium located within a body to be cleaned, having a part thereof composed of a magnetic substance; and

a magnetic field generating device including means for generating a magnetic field, positioned to apply a magnetic force to said magnetic substance by generating a magnetic field in said cleaning medium and to move said cleaning medium with respect to said body,

wherein a ~~cleaning position~~ a portion of the body to be cleaned by said cleaning medium is located inside the body and is cleaned by a rubbing action of said cleaning medium, and

wherein the magnetic field generating device includes means for increasing a magnitude of said magnetic field ~~after a predetermined interval, thereby increasing a specific gravity of the magnetic substance and enabling removal of dirt.~~

Claim 2 (Original): The cleaning system as defined in claim 1, wherein at least a part of said magnetic substance is a magnetic fluid.

Claim 3 (Previously Presented): The cleaning system as defined in claim 1, wherein a polishing agent is contained in said cleaning medium.

Claim 4 (Previously Presented): The cleaning system as defined in claim 3, wherein said magnetic substance is enclosed in an elastic covering material.

Claim 5 (Previously Presented): The cleaning system as defined in claim 1, wherein the particle shape of at least a part of said magnetic substance is polygonal.

Claim 6 (Previously Presented): The cleaning system as defined in claim 1, wherein the respective particle sizes of said magnetic substances and said polishing agent are of at least two sorts.

Claim 7 (Previously Presented): The cleaning system as defined in claim 1, wherein said cleaning system further includes a magnetic field changing device for successively changing at least either one of the strength and the direction of said magnetic field.

Claim 8 (Original): The cleaning system as defined claim 1, wherein said magnetic field changing device generates a successive flow of said cleaning medium to be directed to one direction side by successively changing at least one of said intensity and direction of said magnetic field.

Claim 9 (Original): The cleaning system as defined in claim 8, wherein said magnetic field changing device generates a rotative magnetic field and thereby generates the successive flow for directing said cleaning medium to said one direction side.

Claim 10 (Original): The cleaning system as defined in claim 1, wherein said magnetic field changing device changes said magnetic field to an alternate magnetic field.

Claim 11 (Previously Presented): The cleaning system as defined in claim 1, wherein said cleaning system further comprises:

a dirt removing device, in which, by controlling said magnetic field generating device, the magnetic field having the strength to the extent that the dirt parted from said cleaned object by the operation of said cleaning is caused to float up on the upper surface of said cleaning medium is generated in said cleaning medium.

Claim 12 (Previously Presented): The cleaning system as defined in claim 1, wherein said cleaning system further comprises:

a magnetic field mode changing device for changing in order said magnetic field mode exerted on the same position of said cleaned object by said magnetic field generating device to the plural sorts of mode.

Claim 13 (Previously Presented): The cleaning system as defined in claim 1, wherein said cleaning system further comprises a rubbing material;

wherein, when at least one of the strength and the direction of said magnetic field is successively changed by said magnetic field changing device, the magnetic force applied to the magnetic pole of said magnetic field generating device is utilized as a drive source; and

wherein, by the utilization as said drive source, the position excluding the position of said cleaned object is rubbingly cleaned by said rubbing material.

Claim 14 (Previously Presented): The cleaning system as defined in claim 1, wherein said cleaning system further comprises:

a flushing device for flushing said cleaned object after said cleaning operation and removing the remaining dirt after said cleaning operation.

Claims 15-31 (Canceled).

Claim 32 (Currently Amended): A cleaning system, comprising:

a cleaning medium located within an object to be cleaned, including a magnetic substance;

a magnetic field generating device including means for generating a magnetic field, positioned to apply a magnetic force to the magnetic substance by generating a magnetic force in said cleaning medium, thereby causing the magnetic substance to move and to rub on the object so as to clean a portion of the object, wherein the portion to be cleaned is located inside the object to be cleaned and is cleaned by a rubbing action of said cleaning medium introduced inside the object,

wherein the magnetic field generating device includes means for increasing a magnitude of the magnetic force after a predetermined interval, thereby increasing a specific gravity of the magnetic substance and enabling removal of dirt from the cleaning medium.

Claim 33 (Previously Presented): The cleaning system according to Claim 32, wherein the magnetic substance includes a magnetic fluid.

Claim 34 (Previously Presented): The cleaning system according to Claim 32, wherein the cleaning medium further includes a polishing agent.

Claim 35 (Previously Presented): The cleaning system according to Claim 34, wherein an elastic covering material encases the magnetic substance.

Claim 36 (Previously Presented): The cleaning system according to Claim 34,
wherein:

the magnetic substance is comprised of substance particles, at least a portion of which
have a first particle size,

the polishing agent is comprised of agent particles, at least a portion of which have a
second particle size, and

the first particle size is different from the second particle size.

Claim 37 (Previously Presented): The cleaning system according to Claim 32,
wherein the magnetic substance is comprised of particles, at least a portion of which have
polygonal shapes.

Claim 38 (Previously Presented): The cleaning system according to Claim 32, further
comprising a magnetic field changing device configured to change at least one of the
intensity and the direction of the magnetic field.

Claim 39 (Previously Presented): The cleaning system according to Claim 38,
wherein the magnetic field changing device is configured to generate a successive flow of the
cleaning medium in the direction by successively changing at least one of the intensity and
the direction of the magnetic field.

Claim 40 (Previously Presented): The cleaning system according to Claim 38,
wherein the magnetic field changing device is configured to generate a rotative magnetic
field, which generates a flow for directing the cleaning medium in the direction of the
magnetic field.

Claim 41 (Previously Presented): The cleaning system according to Claim 38, wherein the magnetic field changing device is configured to change the magnetic field to an alternating magnetic field.

Claim 42 (Previously Presented): The cleaning system according to Claim 32, further comprising a dirt removing device configured to cause dirt removed from the object to float to an upper surface of the cleaning medium by controlling the magnetic field generating device.

Claim 43 (Previously Presented): The cleaning system according to Claim 32, further comprising a flushing device configured to remove any remaining dirt on the object by flushing the object after cleaning.

Claim 44 (Previously Presented): The cleaning system according to Claim 1, wherein said cleaning medium is guided onto said cleaning position.

Claim 45 (Previously Presented): The cleaning system according to Claim 8, wherein the magnetic field changing device includes a driving mechanism configured to be moved by the magnetic field generating device.

Claim 46 (Previously Presented): The cleaning system according to Claim 38, wherein the magnetic field changing device includes a driving mechanism configured to be moved by the magnetic field generating device.